

Treating low back pain: Alexander technique and exercise, antibiotics (!) and Paul Hodges on dynamic stability

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I am delighted that major luminaries including Professors Frank Booth and Paul Hodges have agreed to share their wisdom in this issue of *BJSM*. Professor Booth's millennium review, "Waging war on modern chronic diseases",¹ is compulsory reading. It clearly trumps Machiavelli's *The Prince* for top spot among the Great Literature; Macca never made it onto PubMed nor did he get cited 187 times for 1 paper in 8 short years. In his magnum opus, Professor Booth provides incontrovertible evidence that physical inactivity causes medical costs of \$US 1 trillion (yes, trillion, that's a thousand billion) annually in the USA alone. Don't just skip over that number—it happens to equal the estimate for the projected deficit of the USA in 2009. So with just a 12.5% reduction in the cost of physical inactivity, President Obama could have it all paid off by the time he leaves the White House in 2016. Not bad. My point? If you are having trouble justifying the importance of physical activity to a patient, government representative, Dean or President/Vice Chancellor, just slap Professor Booth's paper on the desk and remind the person that a trillion is 16 times the current population of the planet. Emphasise the *annual*. And this is in the USA alone. Time to commit to physical activity—the cure.

For *BJSM* readers, Professor Booth examines the likely connection between physical activity as a fundamental environmental factor and the body's necessary gene expression to improve metabolic health (see page 950).² You can't live without it – the body must receive aerobic exercise stimulus and muscle contraction stimulus to function *normally*. Professor Booth's recent work shows that inactivity causes almost immediate (ie, within 24 hours) increases in key metabolic markers of disease such as insulin

resistance. Activity is not an optional extra. He argues that national research agencies should support the search for the causal link between physical activity and the triple association of survival, athletic performance and prevention of most chronic diseases. Don't watch TV, don't check your email. Please read this article and also consider Witkowski and Spangenburg's thoughtful take on it (see page 952).³ Share this piece around along with "Waging war..."

NOVEL INSIGHTS INTO BACK PAIN

A wonderful clinician-scientist who has successfully waged war on the major problem of low-back pain since the mid 1990s is Professor Paul Hodges. He is widely recognised as providing a major impetus for the clinical application of "core training" in patients with back pain. His innovative and well-funded clinical research team integrates neuroscience and biomechanics to study nervous system control of joint stability and movement. His work has included, but is not limited to, studying the effect of conflicting task demands on spinal control, biomechanical effect of contraction of the intrinsic spinal muscles on spine stability, and the effect of pain on motor control. He and his colleagues are currently examining possible mechanisms of efficacy of therapeutic exercise. Last month, Allison and Morris⁴ challenged some of Professor Hodges' conclusions; this month he replies in an extended editorial (see page 941).⁵ Both these papers show that scientific debate can be vigorous and respectful. Make up your own mind. Feel free to contribute through the *BJSM* Blog (<http://blogs.bmj.com/BJSM/>).

Challenging the established order are two papers from Denmark. If these authors are correct then change is coming to the textbooks. Dr Hanne Albert from Funen shares promising observational data that a low-grade bacterial infection,

treatable with antibiotics, may contribute to low back pain (see page 969).⁶ Of course this paper got rejected from a more prestigious journal. But remember, Marshall and Warren⁷ reported an infectious cause of gastric ulcers, which the experts denounced.⁸ Despite their initial manuscripts being widely rejected, the men at work Down Under stumbled across the Nobel Prize.⁷ *BJSM*'s peer-review, fair-review section⁸ welcomes "Blue Ocean" thinking (<http://www.blueoceanstrategy.com/about/about.php>). And speaking of innovative thinking and prestigious journals, this month's gift from the BMJ is a study that showed the effectiveness of the Alexander Technique in back pain (see page 965).⁹ A treatment that has much "word of mouth" support and until recently, lacked the "evidence-based" stamp.

GLUCOCORTICOIDS, WADA AND GROIN PAIN

In the second iconoclastic paper, Copenhagen's Tobias Torp-Pedersen reports on how glucocorticosteroid injections in 62 patients reduced pain in tennis elbow (see page 978).¹⁰ Their innovation was immediate visualisation of the glucocorticoid effect with Doppler ultrasonography. Their findings are consistent with inflammation, a complex cascade that few understand well.¹¹

Glucocorticoids are never far from team physicians' minds because they are on the World AntiDoping Agency (WADA) Banned List. Time for this unnecessary nuisance to stop, says John Orchard, one of Australia's leading sports medicine identities.¹² Bernard Montalvan responds from Paris – "Mais non!" – they must stay banned (see page 944).¹³

We continue our "virtual theme issue" relating to groin pain. In November's highly-accessed paper, Bradshaw and colleagues¹⁴ reported a clinical algorithm that contrasted on several points from Danish expert Per Holmich's paradigm.¹⁵ Here, Caudill and colleagues from Kentucky share a review of various treatment options (see page 954).¹⁶

I could go on but I'm out of room. I've expanded this on the *BJSM* Blog (<http://www.bmj.bjbm/blogs>). Flick ahead in print for much, much more or click through the table of contents. And remember, January and February are "Physical Activity" months. Guest editor Professor Blair channelled the latest from the greatest – international experts put on their clinically relevant hats and share practical strategies. You can sneak a peek at Online First (<http://www.bjbm.bmj.com>). How to

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evaluate physical activity levels in your patients. What novel benefits of physical activity can you use to help convince them to act! Precisely how to write this most powerful of prescriptions. You'll love our specially-created cartoon cover by renowned *BMJ* artist Malcolm Willet. Enjoy this issue and please do let me know what we can do to make *BJSM* take up more of your sedentary time than it should!

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REFERENCES

1. **Booth FW**, Gordon SE, Carlson CJ, Hamilton MT. Waging war on modern chronic diseases: primary prevention through exercise biology. *J Appl Physiol* 2000;**88**:774-87.
2. **Booth F**, Roberts CK. Linking performance and chronic disease risk: indices of physical performance are surrogates for health. *Br J Sports Med* 2008;**42**:950-2.
3. **Witkowski S**, Spangenburg E. Commentary. *Br J Sports Med* 2008;**42**:952-3.
4. **Allison GT**, Morris SL. Transversus abdominis and core stability – has the pendulum swung? *Br J Sports Med* 2008;**42**:930-1.
5. **Hodges P**. Transversus abdominis: a different view of the elephant. *Br J Sports Med* 2008;**42**:941-3.
6. **Albert HB**, Manniche C, Sorensen JC, Deleuran BW. Antibiotic treatment in patients with low-back pain associated with modic changes type 1 (bone oedema): a pilot study. *Br J Sports Med* 2008;**42**:969-73.
7. **Marshall B**. *Helicobacter pylori*: past, present and future. *Keio J Med* 2003;**52**:80-5.
8. **Khan KM**, Stovitz SD, Pluim B, *et al.* Addressing conflicts of interest and clouding of objectivity: BJSM's "peer review: fair review" section. *Br J Sports Med* 2008;**42**:79.
9. **Little P**, Lewith G, Webley F. Randomised controlled trial of Alexander technique lessons, exercise, and massage (ATEAM) for chronic and recurrent back pain. *Br J Sports Med* 2008;**42**:965-8.
10. **Torp-Pedersen TE**, Torp-Pedersen ST, Qvistgaard E, and Bliddal H. Effect of glucocorticosteroid injections in tennis elbow verified on colour doppler ultrasound: evidence of inflammation. *Br J Sports Med* 2008;**42**:978-82.
11. **Scott A**, Khan KM, Roberts CR, Cook JL, Duronio V. What do we mean by the term "inflammation"? A contemporary basic science update for sports medicine. *Br J Sports Med* 2004;**38**:372-80.
12. **Orchard JW**. Why glucocorticoids should be removed from the World Antidoping Agency's list of banned products. *Br J Sports Med* 2008;**42**:944-5.
13. **Montalvan B**, Duclos M. Why glucocorticoids ought to be kept on the World Antidoping Agency's list of banned products. *Br J Sports Med* 2008;**42**:946-7.
14. **Bradshaw C J**, Bundy M, Falvey E. The diagnosis of longstanding groin pain: a prospective clinical cohort study. *Br J Sports Med* 2008;**42**:551-4.
15. **Hölmich P**. Long-standing groin pain in sportspeople falls into three primary patterns, a "clinical entity" approach: a prospective study of 207 patients. *Br J Sports Med* 2007;**41**:247-52.
16. **Caudill PH**, Nyland JA, Smith CE, Yerasimides JG, Lach J. Sports hernias: a systematic literature review. *Br J Sports Med* 2008;**42**:954-64.

New education sections for BJSM

We are delighted to introduce two new education sections for the journal: the Pictorial Essay and the I-Test being coordinated by Senior Associate Editor Dr Babette Pluim, with support from radiologists Bruce Forster and Mario Maas.

Pictorial Essays are highly-illustrated articles (x rays, CT, MRI, etc) with limited text and related multiple choice questions; I-Tests (or Imaging Tests) are very brief "what's your diagnosis" articles.

The articles and answers will appear in the same issue of the journal (but obviously not on the same page!) and we aim to work with BMJ Learning (learning.bmj.com) to create an interactive online resource for practitioners in sports medicine.

We encourage you to submit your articles for these sections following the instructions for authors http://bjsm.bmj.com/fora/article_type.dtl and we welcome your feedback on this initiative (bjsm@bmjgroup.com).